BlueFire
ETHANOL
The Future of Ethanol

Solazyme, Inc.
561 Eccles Avenue
S. San Francisco, CA 94080

January 14, 2010

Attention: Dr. Tony Day, V.P. R&D

Subject: Letter of Support for Application under DOE-FOA-0000096

Dear Sirs,

I am writing to express BlueFire Ethanol's high level of interest in collaborating with Solazyme Inc. to demonstrate the production of cellulosic algal bio-fuels intended to meet or exceed current specifications and performance requirements for the DOE's transportation fuels through the Demonstration of Integrated Biorefinery Operations program (DOE-FOA-0000096).

BlueFire Ethanol is one of the few viable, world-wide cellulose-to-fermentable sugar companies with demonstrated production experience in creating biofuels from wood wastes, urban trash (post-sorted MSW), rice and wheat straws and other agricultural residues, all of which are in large supply in the United States. BlueFire was established to deploy the EX 4 Technology") for the conversion of cellulosic waste materials to fermentable sugars and biofuels. BlueFire's goal is to develop and operate high-value carbohydrate-based renewable transportation fuel production facilities to provide a viable alternative to fossil fuels on a world-wide basis. These "biorefineries" will convert widely available, inexpensive, organic materials such as agricultural residues, high-content biomass crops, wood residues, and cellulose in municipal solid wastes into sugars for aglae production, direct chemically created fuels or other fermentable biofuels.

We see the demonstration of Solazyme's heterotrophic (no sunlight required) algae growth on Bluefire cellulosic sugars as a very important step in fulfilling the need for renewable fuels. The potential of your algae to EX 4 replace or augment diesel, gasoline or even jet fuels could enhance the economic feasibility of the overall concept and even advance the timeline for commercial deployment.

BlueFire's technology is extremely versatile, both in its ability to utilize a wide variety of feedstocks and in the end-products that it can produce. This versatility enables BlueFire

31 Musick Irvine, CA 92618 Tel 949-588-3767 Fax 949-588-3972 Website: www.bluefireethanol.com

to consider a wide variety of feedstocks and locations in which to develop facilities to become the lowest cost producer of either cellulosic sugars or bio-fuels.

Our technical staff has processed samples of feedstocks for Solazyme evaluation in the past and are confident that through a partnership we can become an important team bringing cellulosic derived renewable fuels to the commercial market We are willing to support this Solazyme proposal to DOE

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Furthermore, to the best of its knowledge, Bluefire owns or will have a license to all the intellectual property rights necessary to provide concentrated cellulosic sugars to Solazyme to carry out algal fermentations to produce purified algal oil to be refined into transportation fuels as set out in proposal in response to DE-FOA-0000096. Limited licenses will be granted to Solazyme only to the extent necessary to accomplish the tasks set out in the proposal.

BlueFire looks forward to participating with Solazyme in this exciting opportunity and to this alternate path to supply renewable biofuels to the California market and beyond.

Best regards,

John E Cuzens

John E. Cuzens, P.E.
Sr. V.P. Chief Technology Officer Bluefire Ethanol Inc.

Attachments:
Revised DOE form SF-424A, Budget Information
Revised DOE form PMC123.1 Budget Justification Excel
Revised DOE form PMC123.1 Budget Justification Word

Cc: Matthew Frome, Director Business Development
Richard Klann, Manager Business Development Bluefire Ethanol, Inc.

31 Musick Irvine, CA 92618 Tel 949-588-3767 Fax 949-588-3972 Website: www.bluefireethanol.com

American Recovery and Reinvestment Act of 2009, P.L. 111-5 (Recovery Act) Additional Budget Justification Information Applications shall provide information which validates that all laborers and mechanics on projects funded directly by or assisted in whole or in part by and through funding appropriated by the Recovery Act are paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of title 40, United States Code (Davis-Bacon Act). For guidance on how to comply with this provision, see http://www.dol.gov/esa/whd/contracts/dbra.htm

To satisfy this requirement, please provide a written affirmation that you will comply with the Davis-Bacon Act, as identified above, along with

Affirmed by

Jonathan Wolfson, CEO

Solazyme Inc.

Applicant Name: BlueFire Ethanol Fuels, Inc. Award Number: DE-EE0002877

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. 81.087				$889,600		
2.				REDACTED		
3.				EXEMPTION 4		
4.						
5. Totals		$0		$889,600		

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) Period 1	(2) Period 2	(3)	(4)	
a. Personnel					
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies				REDACTED EXEMPTION 4	
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)					
j. Indirect Charges					
k. **Totals** (sum of 6i-6j)					
7. Program Income					

Section C - Non-Federal Resources				
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) **Totals**
8. DE-FOA-0000096				
9.				
10.		REDACTED EXEMPTION 4		
11.				
12. **Total** (sum of lines 8 - 11)				

Section D - Forecasted Cash Needs					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	$62,540		$890		$61,650
14. Non-Federal		REDACTED EXEMPTION 4			
15. **Total** (sum of lines 13 and 14)					

Section E - Budget Estimates of Federal Funds Needed for Balance of the Project				
	Future Funding Periods (Years)			
(a) Grant Program	(b) First	(c) Second	(d) Third	(e) Fourth
16. DE-FOA-0000096				
17.		REDACTED EXEMPTION 4		
18.				
19.				
20. **Total** (sum of lines 16-19)				

Section F - Other Budget Information	
21. Direct Charges	22. Indirect Charges

23. Remarks

Applicant Name: Cherokee Pharmaceuticals LLC (sub-recipient) Award Number: DE-EE0002877

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds: Federal (c)	Estimated Unobligated Funds: Non-Federal (d)	New or Revised Budget: Federal (e)	New or Revised Budget: Non-Federal (f)	Total (g)
1. Demonstration of Integrated Biorefinery Operations	81.087			$5,098,998		
2.			REDACTED			
3.			EXEMPTION 4			
4.						
5. Totals		$0		$5,098,998		

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity: (1) Period 1	(2) Period 2	(3)	(4)	Total (5)
a. Personnel					
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies				REDACTED	
f. Contractual				EXEMPTION 4	
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)					
j. Indirect Charges					
k. **Totals** (sum of 6i-6j)					
7. Program Income					

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Section C - Non-Federal Resources

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) **Totals**

8. Demonstration of Integrated Biorefinery Operations					
9.					
10.			REDACTED EXEMPTION 4		
11.					
12. **Total** (sum of lines 8 - 11)					
Section D - Forecasted Cash Needs					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	$343,335		$3,645	$0	$339,690
14. Non-Federal			REDACTED EXEMPTION 4		
15. **Total** (sum of lines 13 and 14)					
Section E - Budget Estimates of Federal Funds Needed for Balance of the Project					
		Future Funding Periods (Years)			
(a) Grant Program		(b) First	(c) Second	(d) Third	(e) Fourth
16. Demonstration of Integrated Biorefinery Operations					
17.					
18.			REDACTED EXEMPTION 4		
19.					
20. **Total** (sum of lines 16-19)					
Section F - Other Budget Information					
21. Direct Charges			22. Indirect Charges		
23. Remarks	REDACTED EXEMPTION 4			REDACTED EXEMPTION 4	

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SF-424A (Rev. 4-92)
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PMC-EF2a

(2.01.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: United States Department of Energy **STATE:** CO

PROJECT TITLE : Administrative Actions CX

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
n/a	n/a		0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

A11 Technical advice and planning assistance to international, national, state, and local organizations.

A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

Rational for determination:

This NEPA determination applies to all administrative actions for EERE projects such as: information gathering (surveys, inventories, audits); data analysis (including computer monitoring); document preparation (preliminary design, feasibility studies, analytical energy supply and demand studies); information dissemination (mailings, publication, distribution, training, conferences, and informational programs) and non-laboratory research. All administrative actions for EERE projects are categorically excluded under A9 and A11.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Any activities identified as prohibited by the DOE Contracting Officer, Project Officer, or the NEPA Compliance Officer; Final Design; Site Characterization; and Environmental Monitoring.

This restriction does not preclude you from:
Administrative activities such as: information gathering (surveys, inventories, audits); data analysis (including computer monitoring); document preparation (preliminary design, feasibility studies, analytical energy supply and demand studies); information dissemination (mailings, publication, distribution, training, conferences, and informational programs) and non-laboratory research.
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Steve Blazek Date: 3/15/2010
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager

Hames, Molly

From: Sterner, Christy
Sent: Monday, March 15, 2010 4:18 PM
To: Hames, Molly
Cc: Kerwin, Kristin
Subject: Blanket CX Applied to Solazyme BP1 Activities

Importance: High

Hi Molly,

As mentioned in the technical evaluation of Solazyme's BP1 activities, I am proposing using the Blanket CX for their BP1 activities. Not only are all of the tasks in line with the Categorical Exclusion, A.9,
Solazyme's BP1 activities include

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All of these activities are 'paper' activities and do not require any activities that would fall out of the A.9 exclusions.

Please let me know if any additional information is necessary. (The EF-2 generated for the BP1 efforts recommends CX A.9 for these activities as well. This is just an FYI as use of the Blanket CX does not require an additional EF-2A.)

Best regards,

Christy Sterner
Project Officer
U.S. Department of Energy
Golden Field Office
Phone: 303-275-4720
Fax: 303-275-4753
email: christy.sterner@go.doe.gov

Go to http://www.eere.energy.gov/golden/funding.aspx for important news regarding Grants.gov.

Email Supporting Funds for BP1

From: Gypsy Achong [gachong@solazyme.com]
Sent: Wednesday, March 03, 2010 4:08 PM
To: Sterner, Christy
Cc: Lindeman, Chris
Subject: Budget Period 1 contractual spend

Dear Christy,

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EXEMPTION 4

Please let me know if you have any questions.

Best wishes,

Gypsy

Gypsy Achong

Email:

Phone:

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Solazyme, Inc.

561 Eccles Avenue

South San Francisco, CA 94080

The information in this e-mail (including attachments, if any) is considered confidential and is intended only for the recipient(s) listed above. Any

EX 4

review, use, disclosure, distribution or copying of this e-mail is prohibited except by or on behalf of the intended recipient. If you have received this email in error, please notify me immediately by reply email, delete this email, and do not disclose its contents to anyone. Thank you.

PMC 121.1
(07/2008)

U.S. DEPARTMENT OF ENERGY
PROJECT MANAGEMENT CENTER

PRE-AWARD INFORMATION SHEET

ALL INFORMATION REQUESTED ON THIS FORM MUST BE PROVIDED

Awardee Name:	Solazyme, Inc.
Award Number:	DE-FOA-0000096
Awardee Business Officer:	Jonathan Wolfson
Awardee Project Director:	David Brinkmann

Employer/Taxpayer Identification Number (EIN/TIN):	33-1077078
Data Universal Numbering System (DUNS):	145862012

For assistance in obtaining a DUNS Number, call Dunn & Bradstreet at 1-800-333-0505.
The Applicant should be prepared to provide the following information to Dunn & Bradstreet:
(1) Company name
(2) Company address
(3) Company telephone number
(4) Line of business
(5) Chief executive officer/key manager
(6) Date the company was started
(7) Number of people employed by the company
(8) Company affiliation

Note: Awardee Name, EIN/TIN and DUNS MUST coincide with the Awardee's information recorded in the Central Contract Registry (CCR).

A. TYPE OF BUSINESS - the Awardee is a:

- ☐ For-Profit Organization (Other than Small Business)
  - ☐ Corporation
  - ☐ Partnership
  - ☐ Sole Proprietorship
- ☐ Government
  - ☐ Local Government
  - ☐ State Government
  - ☐ Indian Tribal Government
- ☐ Individual
- ☐ Institution of Higher Education
- ☐ Other NonProfit Organization
- ☒ Small Business
- ☐ Other (specify):

If NonProfit, select one below:

☐ A university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 USC 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC 501(a)); or

☐ An organization of the type described in Section 501(c)(4) of the Internal Revenue Code of 1954 (26 USC 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC 501(a)); or

☐ An organization of the type described in Section 501(c)(6) of the Internal Revenue Code of 1954 (26 USC 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC 501(a)); or

☐ A nonprofit scientific or educational organization qualified under a State nonprofit organization statute. (Please identify the statute.); or

☐ Other (specify type):

Is the Applicant a member of the Federal Demonstration Partnership (FDP)? ☐ Yes ☐ No
A listing of FDP members is available at http://www.thefdp.org/FDP_Members.html.

B. INTELLECTUAL PROPERTY

1. WAIVER OF DOE PATENT RIGHTS

This section applies only to large businesses and nonprofits other than 501(c)(3) organizations. All others should leave this subsection blank and proceed to the "Rights in Application Data" subsection that follows. Large businesses and nonprofits other than 501(c)(3) organizations have the right to request, in advance or within 30 days after execution of an award, in accordance with applicable statutes and DOE Patent Waiver Regulation (10 CFR 784), a waiver of all or any part of the rights of the United States in Subject Inventions. Accordingly, please check all that apply:

☐ I intend to request an advance waiver in accordance with 10 CFR 784.
☐ I intend to request an advance waiver on behalf of one or more subrecipients/subcontractors.
☐ I have at least one subrecipient/subcontractor that will request a waiver on its own behalf.
☐ I do not intend to request an advance waiver.

2. RIGHTS IN APPLICATION DATA

For an award based on an application/proposal, the Government will obtain unlimited rights in the technical data contained in the application/proposal, unless the Awardee marks those portions of the technical information which it asserts as "proprietary data" or specifies those portions of such technical data which are not directly related to or will not be utilized in the work to be funded under this award.

Accordingly, please indicate:

☐ No restrictions on Government rights in technical data contained in the application/proposal; or

☒ The application/proposal contains the following identified technical data that is proprietary, or is not directly related to, or will not be utilized in the work to be funded under this award.

Please list specific page numbers, table numbers, etc., and the dated version of the application/proposal to which you refer: See 091222_Solazyme_AttachmentA_PreAwardInfoSheet_PMC121.1_SectionB2.pdf

3. IDENTIFICATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE

Below, please identify any Limited Rights Data or Restricted Computer Software you plan to use to carry out your work under the award. Limited Rights Data means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial, and confidential or privileged. Restricted Computer Software means computer software developed at private expense and that is a trade secret, is commercial or financial, and confidential or privileged, or is published, copyrighted computer software, to include modifications of the computer software.

Please note that these data do not include data that you will produce under this award. Data that is first produced under this award is treated separately under the data rights clause of this award. This section covers only those data that you bring into this award that were privately funded.

If you plan to use Limited Rights Data or Restricted Computer Software under the award, please describe it in a few sentences or bullets, with sufficient detail that the DOE Project Officer can determine whether DOE will need to have any of it delivered, for example, to validate your results or the data produced under the award. You are not required to list issued patents or published patent applications. You do need to list unpublished patent applications (by title and brief description) and trade secret processes (by non-proprietary title with brief, non-proprietary description). If you have questions regarding the completion of this section, please contact the Contract Specialist handling your award.

Based on the above, please review the requirements in the technical scope of work for this award and indicate, to the best of your knowledge:

☐ No Limited Rights Data will be utilized in the performance of this award.

☒ Limited Rights Data as follows will be utilized in the performance of this award.

Use this block to provide additional information or provide an attachment: See 091221_Solazyme_AttachmentB_PreAwardInfoSheet_PMC121.1_SectionB3.pdf

Based on the above, please review the requirements in the technical scope of work for this award and indicate, to the best of your knowledge:

☒ Awardee Restricted Computer Software will NOT be utilized in the performance of this award.

☐ Awardee Restricted Computer Software as follows will be utilized in the performance of this award.

Use this block to provide additional information or provide an attachment:

C. PROJECT PERFORMANCE SITE and CONGRESSIONAL DISTRICT

List the address and congressional district for the primary site where the work will be performed:

Street Address:	**Cherokee Pharmaeuticals, LLC, 100 Avenue C, P.O. Box 367**
City:	**Riverside**
State:	**PA**
Zip:	**17868**
Congressional District:	10th Congressional District in Pennsylvania

If a portion of the work will be performed at any other site(s), identify those site(s) below, and indicate what portion of the effort will be performed at this/these site(s):

Street Address:	Solazyme, 201 Gateway Boulevard
City:	South San Francisco
State:	CA
Zip:	94080
Congressional District:	12th Congressional District in California

Briefly describe portion of effort for this Site:	Optimization of fermentation parameters at laboratory scale to support integrated pilot operations at SzIBR

Street Address:	UOP, 5200 Underwood Road
City:	Pasadena
State:	TX
Zip:	77507
Congressional District:	22nd Congressional District in Texas

Briefly describe portion of effort for this Site:	Production of renewable diesel from algal oil

Street Address:	REG, 3426 East 28th St N
City:	Newton
State:	IA
Zip:	50208
Congressional District:	3rd Congressional District in Iowa

Briefly describe portion of effort for this Site:	Production of biodiesel from algal oil

D. INVOICING AND PAYMENTS

1. Has the Awardee received any prior DOE awards administered by the Golden Field Office (GO)?

   ☐ Yes

   If yes, please list the most recent award number: _____

   ☒ No

2. Is the Awardee currently enrolled with the U.S. Department of Treasury / ASAP system (Automated Standard Application for Payment System) under the DOE / Golden Field Office (GO) Agency Locator Code (ALC) and Region Code (#8900-0001-04)?

   ☐ Yes

   Enter Awardee Seven-digit ASAP ID Number: _____

   ☒ No

3. Please provide the following contact information for ASAP and/or Payments:

IMPORTANT: If not currently enrolled in the ASAP system under GO's ALC and Region Code, the person identified below will be contacted by the U.S. Department of Treasury with further instruction on completing the ASAP enrollment process.

ASAP / Payments Contact Person: **Yelena Popova**

Phone No.: **650-963-5215** Extension: **N/A** E-mail: **ypopova@solazyme.com**

4. Indicate preferred payment method below: (NOTE: this section is reserved for universities, hospitals, other non-profit organizations and state and local governments that are authorized Advance Payment Procedures, unless a specific need is supported. All other entities desiring advance payment should discuss with the DOE Award Administrator.)

☐ Payment by Advance is preferred. (SF 272 reporting will be required.)
☐ Payment by Reimbursement is preferred. (SF 272 reporting will not be required.)

5. Indicate the name, phone number, and email address of the Designated Responsible Employee for complying with national policies prohibiting discrimination (see 10 CFR 1040.5 and the Certifications and Assurances found at http://management.energy.gov/documents/CERTSASSUR.doc).

Lisa Roslund	**650-963-5211**
Name	Telephone Number
Director, Human Resources	**lroslund@solazyme.com**
Title	Email Address

REPRESENTATION/CERTIFICATION

I represent by my signature below that all the information provided by this form is accurate.

Name: Jonathan Wolfson

Title: Chief Executive Officer

Signature of Authorized Company Official:

Date: December 22, 2009

Attachment A

Solazyme, Inc. considers its entire Application entitled, "Solazyme's Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae" in response to DE-FOA-0000096 to be technical data that is proprietary to Solazyme, Inc., except for the following files:

- "Summary.pdf" that contains the Project Summary/Abstract File for this Project.
- "091221_Solazyme_PMC134_1_StatementOfProjectObjectives.pdf" that contains the Statement of Project Objectives for this Project
- "091223_IBR_ARRAprojects_Solazyme.pdf" that contains a Project Description for posting to the DOE website

Specifically, the following submissions are to be considered Proprietary Data and the Government in their entirety, except for the file referenced above, and hereby request that DOE shall treat such submissions as Limited Rights Data.

Title	Submission Date
Entire Solazyme Application under DE-FOA-0000096 entitled "Solazyme's Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae," except for the Project Summary/Abstract File. See below for the specific document names/file names.	Original submission: dated June 29, 2009 (PST), and received by DOE on June 30, 2009 (EST)
Document entitled "Solazyme's Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae"; DE-FOA 0000096—Budget Clarification Submission. See below for specific document	Submitted to DOE September 27, 2009

names/file names	
Oral presentation and accompanying slides/reference materials	Oral presentation date: October 9, 2009 and slide deck submission prior to oral presentation.
Financial Assistance Pre-Award Information Sheet, PMC 121.1	Part of Pre-Award submission on December 23, 2009; File name: 091222_Solazyme_PreAward InfoSheet_PMC121_1.pdf
Financial Information, PMC 410.1 with DCAA Audit Attachment	Part of Pre-Award submission on December 23, 2009; File names: 091210_Solazyme_Financial_Information_ Request_PMC410_1.pdf 091223_Solazyme_Attachment_PMC410_1_ DCAA_Audit_04281_2009A17740010.pdf
Representation of Limited Rights Data and Restricted Computer Software	Part of Pre-Award submission on December 23, 2009; File names: 091222_Solazyme_AttachmentA_PreAwardInfoSheet_PMC121_1_ SectionB2.pdf 091221_Solazyme_AttachmentB_PreAwardInfo Sheet_PMC121_1_SectionB3.pdf
Environmental Checklist, EF1	Part of Pre-Award submission on December 23, 2009; File names: 091222_EF1.doc Solazyme_Environmental questionnaire for FOA application.pdf Solazyme_PEP_Section8_NEPA.pdf
Letters of Commitment	Originally submitted as part of Solazyme Application under DE-FOA-0000096 on June 29, 2009 (PST). Resubmitted as part of Pre-Award submission on December 23, 2009; File names, see below.
Indirect Rate Agreement of a Rate Proposal	Originally submitted on September 27, 2009 as part of the Budget Clarification Submission. See below for file name.

Documents submitted as part of Solazyme Application under DE-FOA-0000096 entitled "Solazyme's Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae", submitted June 29, 2009 (PST).	
Name of Document	**File Name**
SF 424- Application for Federal Assistance	Solazyme-Application for Federal Assistance.pdf
Project/Performance Site Location	PPSL.doc
Project Narrative File, including Project Narrative Cover Sheet.	Project.pdf
Resume file	Resume.pdf
SF 424A Excel—Budget Information for Non-Construction Programs File	SF424A.xls
Budget Justification File	1. BudgetJustification.xls 2. Indirect Rate Justification.doc

Letters of Commitment	1. ABNT support letter.pdf 2. Cherokee cost share letter.pdf 3. UOP support letter.pdf
Subaward Budget Files	1. Abengoa_budgetjustification.xls 2. Abengoa424.xls 3. bluefire_budgetjustification.xls 4. bluefire424.xls 5. bluefire_justification.doc 6. cherokee424.xls 7. Cherokee_budgetjustification.xls 8. Cherokee_indirect rate justification.doc 9. uop424.xls 10. uop_budgetjustification.xls
Environmental Questionnaire	Enviro.pdf
Project Management Plan	PMP.pdf
Histrorical, Current and Planned Technical and Financial Data	TechandFinData.xls
Business and Commercialization Plan	BusComPlan.pdf
Pro forma	Proforma.xls
IP Statement and Supporting Documentation	ProjectIP.pdf
Process Flow Diagram and Supporting Data	PFD_Data.pdf
Life-Cycle GHG Emission Reduction Data	LCA_GHG.xls
Petroleum Displacement Analysis	Petro.doc
Project Execution Plan	ProjExecPlan.pdf

Documents submitted as part of "Solazyme's Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae"; DE-FOA 0000096—Budget Clarification Submission.	
Name of Document	**File Name**
Cover letter from Tony Day	Solazyme Budget Clarification.doc
PMC123.1-Budget Justification for SF 424A Budget (Sub-recipient UOP)	Solazyme_uop_budgetjustification_revB.xls
PMC123.1- Budget Justification for SF 424A Budget (Solazyme Indirect Costs)	Solazyme_BudgetJustification_revB.xls
Explanation to Indirect Rate Justification Spreadsheet	Solazyme_IndirectRateJustification_revB.doc
PMC123.1- Budget Justification for SF 424A Budget (Solazyme Other Direct Costs)	Solazyme_reg_budgetjustification_revA.xls

Attachment B

Limited Rights Data that will be utilized in the performance of this award include the following:

Part 1. Unpublished Patent Applications	
Title	**Brief Description**

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REDACTED

FOIA EXEMPTION 4

PMC 120.1
(12/09)

U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE

FINANCIAL ASSISTANCE COMBINED COST/TECHNICAL EVALUATION AND NEGOTIATION MEMORANDUM

SECTION I - GENERAL INFORMATION

This technical evaluation/negotiation memorandum will be prepared jointly by the assigned DOE/Golden OCPM AND OAFA personnel, to document the specific action being evaluated and supported. Each office is responsible for certain sections of this document. The assigned OCPM and OAFA personnel responsible for the action will both sign this document upon its completion, demonstrating their agreement on its contents.

1. Recipient: Solazyme, Inc.

2. Grant/Cooperative Agreement No.: DE-EE0002877 Modification No. 001
   Requisition No: 10EE003271
   Project Title: Recovery Act: Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae

3. Type of Action: ☐ New Award ☐ Renewal ☐ Continuation ☒ Revision

Description of this Action: (NOTE: Indicate what is addressed by this Action only):

The purpose of this action is to lift the conditions on the Ex 4 o be used in Budget Period 1 of the award for Solazyme, Inc. for the project entitled "Recovery Act: Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae." It also approves the scope and budget for Budget Period 1. Please note in the dates below that there may be a third budget period (to be decided in BP2); hence the difference between the Budget Period 2 end date and the project Period end date.

4. Award type, as determined at Procurement Strategy Meeting (for new awards): ☐ Grant ☒ Cooperative Agreement

If Cooperative Agreement, provide the specifics of the Substantial Involvement. (Note: This language will be used in the Substantial Involvement provision of the award.):

1. Government Insight

   In order to adequately monitor project progress and provide technical direction and/or redirection to the Recipient, DOE must be provided an adequate level of insight into various Recipient activities. Government Insight activities by DOE include attendance at Recipient meetings, reviews and tests, as well as access for DOE's consultants to perform independent evaluations of Recipient's plans and processes. Recipient shall notify the DOE Project Officer of meetings, reviews, and tests in sufficient time to permit DOE participation, and provide all appropriate documentation for DOE review.

2. Specific activities to be conducted by DOE:

   a. Risk Evaluation – DOE will review the Recipient's initial Risk Mitigation Plan (RMP) for quality and completeness. DOE will also monitor updates to the RMP and actions taken by the Recipient during the performance of its award to mitigate risks and improve the probability of successful execution of the integrated Biorefinery project. At DOE's discretion, additional independent risk analyses of the project by DOE consultants may be requested.

   b. Independent Engineering Assessments – DOE will engage a private, independent engineering (IE) firm to assist in assessing the progress of the project and provide timely and accurate reports to DOE. The Recipient will ensure that the IE has access to any and all relevant documentation sufficient to allow the IE to provide independent evaluations to DOE on the progress of the project. Such documentation includes but is not limited to the following:

- Drawings and specifications
- Construction and Execution plans
- Resource loaded schedules
- Design functions and requirements for the site final design review
- Risk management plans
- Value management and engineering studies and/or plans
- Acquisition strategies
- Project execution plans
- Project controls including earned value management systems
- Qualifications of the integrated project team.
- Financial strategy for funding the construction project
- Updated marketing and business plan
- Invoices submitted to DOE

DOE will evaluate the quality and completeness of information and documentation provided by the Recipient to DOE and its consultants in order to allow DOE to provide technical direction and/or redirection to the Recipient about how best to achieve the purposes of the award. Consultants to DOE may not provide technical direction and/or redirection to the Recipient.

5. New/Revised Project Period for this Award: From: 01/28/2010 To: 03/31/2013
   New/Revised Budget Period 1 for this Award: From: 01/28/2010 To: 09/30/2010
   New/Revised Budget Period 2 for this Award: From: 10/01/2010 To: 03/31/2013

6. Compliance Assessment (skip if new award):
   a. Deliverables
      The Recipient is current in submitting required reports: ☒ Yes ☐ No
      If no, identify the delinquent report(s), indicate what action(s) have been taken to remedy the situation, and identify what further action(s) are necessary, if any:

      The original award was fully conditional; therefore, there were no reporting requirements aside from RA reporting, of which the first report is due after the end of this quarter.

   b. Financial
      The Recipient is current in meeting the cost share requirement: ☐ Yes ☐ No
      If no, indicate what action(s) have been taken to remedy the situation and validate why this new action should proceed:

      N/A – the original award was fully conditional.

7. Check the applicable box for Funding Appropriation:
   ☒ Energy and Water ☐ Other _____

8. Check the applicable box for Statutory Authority:

   ☒ 109-58, Energy Policy Act 2005
   ☐ 110-140, Energy Independence and Security Act 2007
   ☒ ARRA
   ☐ Other: _____

9. Per 10 CFR 600, the preferred payment method for State/Local Governments, Institutions of Higher Education, Hospitals, or Other Non-Profit Organizations is **Advance**. The preferred Payment Method for For-Profit organizations is **Reimbursement**. Please state the payment method that will be used for this award in the box below. If the preferred payment method is not planned for a new award, provide an explanation below. Also, explain below if the payment method for the award is being changed by this action. If the ACH or the "ASAP Approval Required" payment methods is required, include an explanation for the restriction.

   The recipient is receiving ARRA funds and will continue to be on the ACH payment method to monitor their funds to ensure costs outside of Budget Period 1 are not charged to the award.

10. Is the proposed Recipient on the debarred or suspended list? Yes ☐ No ☒
    Are any of the proposed subrecipients/subcontractors on the debarred or suspended list? Yes ☐ No ☒
    Is the Project Director on the debarred or suspended list? Yes ☐ No ☒
    If yes for either response above, award cannot be made without obtaining a waiver. See attached waiver.
    The review was conducted on the Internet on 03/15/2010 (Include Printout in permanent STRIPES file)

11. A risk determination has been completed on the PMC Form 460.2 Yes ☒ N/A ☐

12. Negotiation:

	Government Negotiator(s)		Recipient Negotiator(s)	
	Name	Organization	Name	Position
1.	Molly Hames	DOE – Contract Specialist	David Brinkmann	VP Manufacturing (PI)
2.	Christy Sterner	DOE – Project Officer	Dr. Anthony Day	VP R&D
3.	Chris Lindeman	Navarro – Project Engineer	Gypsy Achong	Project Manager

SECTION II – NEGOTIATION SUMMARY

1. Please record any significant application or budget submissions that resulted in a revised budget in the Negotiation History Table below (including SF424A, budget justifications, e-mails, etc.):

Application/Budget Submission	Reference Document (s)	Date of Submission	Summary of Change
Original		7/8/2009	
Revision 1	SF 424A; PMC 123.1	1/20/2010	Updated SF-424a and PMC 123.1 to reflect Solazyme Ex 4 cost share
Revision 2	SF 424A; PMC 123.1	3/2/2010	Updated to reflect shifting some tasks
Revision 3 - final	SF 424A; PMC 123.1	3/3/2010	Updated and finalized after correcting small error

2. Complete Budget Table below (only include the original budget and final negotiated costs – the Percent of Total Negotiated Budget will calculate automatically)
Note: List proposed amounts by category even if there are no differences in the dollar amount.

Element of Cost	Original Budget Submission	Final Negotiated Costs	Percent of Total Negotiated Budget	Fringe Benefits and Indirects	
				Proposed Rate	Negotiated Rate
Personnel					
Fringe Benefits					
Travel					
Equipment					
Supplies					
Contractual					
Construction					
Other					
Total Direct Charges					
Indirect Charges					
TOTAL	$				
Program Income					
DOE Share (non-FFRDC)					
DOE Share (FFRDC)					
Total DOE Share					
Non-Federal Cost Share					

REDACTED
EXEMPTION 4

SEE ATTACHED SF 424A FOR BUDGET PERIOD BREAKDOWN

3. Total Allowable Adjustment without Concurrence from the Selection Official per the Selection Statement: ____

Actual Total Adjustment based on Budget Table Above: —

REDACTED
EXEMPTION 4

*Total Budget (not Budget Period 1) has not changed other than adding the required cost share per the Selection Statement.

Is the original budget the same as the negotiated budget: ☐ Yes ☒ No

If No, please check all boxes that apply:

☒ Change in the Project Scope

Original scope did not have any detailed engineering/design work in BP1; these engineering/design tasks were shifted from BP2 in original application to BP1 in current negotiated BP1 scope. Also, preliminary testing of one of the Subcontractor's lignocellulosic sugar stream was moved from BP1 to BP2.

☐ Changes due to Time Delays

☒ Math Errors in Budget (Final revision on 3/3/2010 was due to a minor math error.)

☐ Changes in Indirect/Fringe Costs Caused Changes in Direct Costs or Total Project Costs

☐ Indirect/Fringe Rates incorrectly applied

☒ Other (explain) Original application cost share; selected on condition of achieving Solazyme to $5.4M to reach the cost share requirement while maintaining the same level of DOE funding.

REDACTED
EXEMPTION 4

4. Briefly describe and explain any substantial change(s) to the original Statement of Project Objectives submitted by the recipient:

Project Officer commentary: SOPO was not submitted in original application. However, as noted above, the original BP1 effort included performing preliminary evaluations on This effort has been moved to BP2.

REDACTED
EXEMPTION 4

SECTION III – TECHNICAL EVALUATION SUMMARY

A. For each cost category, the Project Officer and the Specialist will complete his/her Technical Evaluation of the Negotiated Costs to confirm that they are all reasonable, allowable, and allocable. Additional comments should be added as necessary and as indicated below.

1. Personnel:

REDACTED
EXEMPTION 4

Total Negotiated Personnel Costs:	Not Applicable, the recipient did not propose Personnel costs: ☐

Project Officer:
The labor hours proposed in the negotiated budget are reasonable for the scope of work: ☒

The types of labor and labor mix proposed in the negotiated budget is reasonable: ☒

The proposed labor rates are reasonable: ☒

The proposed rates appear reasonable based on the activities being performed in BP1, the staff/positions listed as participating in the activities, and the distribution of hours assigned to each activity and position.

Specialist:
Please fill out the following table with the negotiated costs:

Labor Type	Budget Period 1		
	Hours	Rate	Total
Project Manager			
Project Manager			
Sr. Dir. Prog. Mgmt & Logistics			
Dir. Bus. Develop.			
VP Manufacturing			
VP R&D			
SVP R&D			
Sr. Mgr. Ferment.			
SVP Manufact. & Proc. Develop.			
Mgr. Downstream Proc. Develop.			
Proc. Develop. Eng.			
Dir. Of Ops.			
Ops. Mgr.			
Total:			

REDACTED
EXEMPTION 4

Negotiated labor rates are reasonable: ☒

Please detail the basis for the reasonable determination: The negotiated personnel costs are necessary and reasonable for the activities involved in budget period 1 of the award. The personnel are all comparable to labor rates in the area based upon www.salary.com and the department of labor rates.

2. Fringe Benefits:

Total Negotiated Fringe Benefit Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Fringe Benefit costs: ☐
Specialist: Does the Recipient have an approved rate agreement: ☐ Yes ☒ No If Yes, List the Date of Rate Agreement: _____ Cite Federal Cognizant Agency: _____ If No, select one of the following: ☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination) ☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination) List Date of review: ☐ Specialist determined that rate was reasonable ☒ Other: **Due to time constraints, the "Reopener Clause" will be placed into the Special Terms and Conditions of the award. These costs will be addressed and approved at a later date.** The fringe benefit costs in the negotiated budget were appropriately applied and are reasonable: ☐	

3. Travel:

Total Negotiated Travel Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Travel costs: ☐
Project Officer: The number and type of trips proposed in the negotiated budget are reasonable for the scope of work: ☒ The costs per trip proposed in the negotiated budget are reasonable: ☒ Is foreign travel included in the negotiated budget: ☐ Yes ☒ No	
☒ Specialist concurs: The proposed travel costs are reasonable for the scope of work to be performed under budget period 1 for this award.	

4. Equipment:

Total Negotiated Equipment Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Equipment costs: ☒
Project Officer: The type(s) of equipment proposed in the negotiated budget is/are reasonable for the scope of work: ☒ The cost of equipment proposed in the negotiated budget are reasonable: ☒ Is there any proposed equipment with a total cost exceeding $50,000: ☐ Yes ☒ No	
☒ Specialist concurs.	

5. Supplies:

Total Negotiated Supplies Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Supplies costs: ☒
Project Officer: The types /quantities of supplies proposed in the negotiated budget are reasonable based on the scope of work: ☒ The costs of supplies proposed in the negotiated budget are reasonable: ☒	

☒ Specialist concurs.

6. Contractual:

Total Negotiated Contractual Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Contractual costs: ☐

Project Officer:

The subrecipients proposed in the negotiated budget are appropriate for the scope of work: ☒

The contractual costs proposed in the negotiated budget are reasonable: ☒ Yes

Please fill out the following table with the negotiated costs:

Subrecipient/ Vendor Name	BP 1 Cost	BP 2 Cost	Total Cost	Role in Project (Identify SOPO Tasks)
Cherokee (sub)				
Abengoa (sub)				
Bluefire (sub)				
UOP(sub)				
NRG (vendor)				
REG (vendor)				
REG (vendor)				
REG (vendor)				
Brownstein Hyatt Farber Schreck (vendor)				
David Ephron (vendor)				
EPC Contractor (vendor)				

REDACTED EXEMPTION 4

The changes in the contractual budget since the original application are primarily due to ..

REDACTED EXEMPTION 4

All subrecipients are expected to have scopes and budgets in BP2 that exceed the $250,000 threshold for separate evaluation.

Solazyme is preparing to send a request for proposals to REDACTED EXEMPTION 4

This is a reasonable amount for such work, and as soon as the contract is completed Solazyme intends to submit it to DOE.

Did the Recipient propose any subrecipients with total costs above $250,000? ☐ Yes ☒ No (If Yes, a separate Technical Evaluation/Negotiation Memorandum is required for each subrecipient/vendor – see below)

☒ Specialist concurs: The proposed contractual and vendor costs are necessary for budget period 1 activities and they are reasonable. The appropriate documentation has been received for each.

7. Construction:

Total Negotiated Construction Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Construction costs: ☒

Project Officer: Please note that the SF 424A included the EPC Contractual costs under the 'Construction' budget category. These are contractual costs and have been moved to the 'Contractual' budget category.

The type of construction proposed in the negotiated budget is appropriate for the scope of work: ☒

The construction costs proposed in the negotiated budget are reasonable: ☒
☒ Specialist concurs.

8. Other Direct Costs:

Total Negotiated Other Direct Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Other Direct costs: ☒
Project Officer: The types of other direct costs proposed in the negotiated budget are reasonable for the scope of work: ☒ The costs proposed in the negotiated budget for other direct costs are reasonable for the scope of work: ☒	
☒ Specialist concurs.	

9. Indirect Charges:

Total Negotiated Indirect Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Indirect Costs: ☐
Specialist: Does the Recipient have an approved rate agreement: ☐ Yes ☒ No If Yes, List the Date of Rate Agreement: _____ Cite Federal Cognizant Agency: _____ If No, select one of the following: ☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination) ☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination) List Date of review: ☐ Specialist determined that rate was reasonable ☒ Other: **Due to time constraints, the "Reopener Clause" will be placed into the Special Terms and Conditions of the award. These costs will be addressed and approved at a later date.** The indirect costs proposed in the negotiated budget were appropriately applied and are reasonable: ☐	

10. Cost Share:

Project Officer:

Project is a: ☒ Research ☒ Development ☐ Demonstration ☐ Other: Pilot Plant

The minimum recipient's cost share required for this award is: 20%

The recipient proposed cost share for this award is: 20%

Does the proposed cost share meet the minimum requirement: ☒ Yes ☐ No

Specialist:

Is the proposed cost share: ☒ Cash ☐ In-kind

	Organization	Type of Cost Share (cash or in-kind)	Cost Share Amount	Basis of Value (how the recipient calculated value)
		REDACTED EXEMPTION 4		
Total				

Third Party cost share commitment letters have been obtained: ☒ (Please include letters in permanent STRIPES file)